

**SMALL NAVIGATION PROJECT**

**STONY CREEK  
BRANFORD, CONNECTICUT**

**DETAILED PROJECT REPORT**



**DEPARTMENT OF THE ARMY  
NEW ENGLAND DIVISION, CORPS OF ENGINEERS  
WALTHAM, MASS.**

**JUNE 1967  
(ADVANCE DRAFT)**

NEDED-R (23 June 67)

2d Ind

SUBJECT: Detailed Project Report for Small Navigation Project,  
Stony Creek, Branford, Connecticut

DA, New England Div, Corps of Engrs, Waltham, Mass. 02154 13 Dec 1967

TO: Chief of Engineers, ATTN: ENGCW-PD

1. Revisions, in accordance with directives in 1st Indorsement, have been made and are shown on pages i, ii, iii, 8, 9, 11, 12, 15, 17, 20, 21, 22, 23, 25, 26, 27, and "Table of Contents" page. Twelve sets of these revised pages (marked R 12/67) are inclosed.

2. In accordance with ER 1165-2-14, paragraph 14(5), there are inclosed twelve (12) sets each of the 1st and 2d Indorsements, copies of the Governor's comments and comments of the Board of Selectmen of the Town of Branford to complete the project report.

3. Members of Congress and the Governor of Connecticut were notified of formal adoption of the project by letters dated 4 December 1967. The State of Connecticut Water Resources Commission and the Board of Selectmen of Branford were notified of project authorization on 6 December 1967. For record purposes, the date of project authorization is 4 December 1967.

18 Incl

1 and 2 nc

Added 17 Incl

as (12 cys each)

REMI O. RENIER

Colonel, Corps of Engineers

Division Engineer

cc: Div Engr  
Mr. Leslie  
Mr. Hill  
Mr. Argin  
Program Dev Co  
Mrs. Lytle, 882-11  
Reading Office  
Eng Div Files

cc: cc

Purposes: Cell-explanatory

ENGWCW-PD (23 Jun 67) 1st Ind  
SUBJECT: Detailed Project Report for Small Navigation Project,  
Stony Creek, Branford, Connecticut

DA, CofEngrs, Washington, D. C., 20315

2 August 1967

TO: Division Engineer, New England

1. Subject to the inclosed review comments, the proposed draft report is satisfactory.

2. The report should be revised as appropriate after consideration of these comments. Subject to the foregoing, the Governor of Connecticut may be informed of the project proposal and official state endorsement obtained. After receipt of favorable State and agency comments fully endorsing the proposal, the Stony Creek project may be considered formally approved under Section 107 of the 1960 River and Harbor Act as amended. Authority is then granted to issue simultaneous notification to the concerned Members of Congress and the State Governor informing them of the formal project approval and adoption under Section 107. The notification should describe the project and required local participation. For record purposes, the date of notification is considered to be the date of the final project approval and adoption.

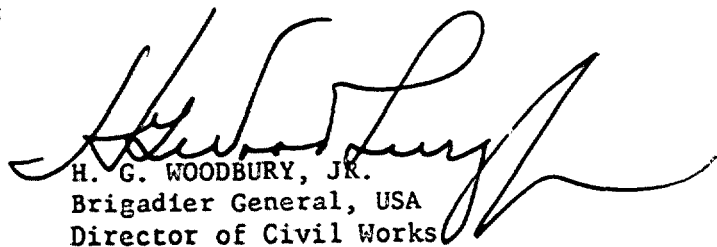
3. The Stony Creek project will take its place on the backlog of approved Section 107 projects in accordance with paragraph 17, ER 1165-2-14. Authority is granted to commence project preconstruction work, including preparation of plans and specifications. The following work allowance is established to cover preconstruction work by New England Division under Section 107.

<u>Location</u>	<u>Code 902-</u>	<u>Amount</u>
Stony Creek, Branford, Conn.	216	\$15,000

4. Allotment of \$15,000 under appropriation 96X3122 Construction, General will be sent New England Division by separate communication.

FOR THE CHIEF OF ENGINEERS:

Incl  
1 w/d  
2. Added  
OCE Review Cmts

  
H. G. WOODBURY, JR.  
Brigadier General, USA  
Director of Civil Works

2 August 1967

OCE Review Comments  
Section 107 Detailed Project Report  
Stony Creek, Branford, Connecticut

1. Appropriate revisions should be made to the report after consideration of the comments in the following paragraphs.

2. Data should be provided on project formulation as required by paragraph 8 of EM 1120-2-113. These data should include the derivation of channel depth, width, and area of the basin. Information should be included on the probable overall boating requirements in the general vicinity for the period of analysis and the report should demonstrate that the proposed improvement will satisfy these demands.

3. It is not clear how the craft presently using facilities at the head of the harbor, the Brainerd Marina for instance, will receive any benefits from the proposed improvement. Apparently, the boats now rest on their bottom at low tide; hence, unless there is a considerable amount of local interest access channel and berth dredging performed in these areas, there will be no way for the boats to make use of the proposed improvement. As the tide rises the grounded boats become water-borne and can navigate regardless of whether the proposed improvement is provided or not. Therefore, no benefits would seem valid for these craft without provision of some dredging by local interests. Further, it is not clear that the improved harbor will provide adequate facilities for the 507 boats (exclusive of 90 rowboats) on which the benefits are based. The evaluations reveal that about 457 craft will be using the improvement virtually immediately after its provision and that over the period of analysis there will be a normal increase of 50 boats. Presently, anchoring at about 12 boats to the acre, the harbor can, at best, provide for only 264 craft. Thus, space for about 200 additional craft will be needed after provision of the improvement. If factually correct, the report could state that the presently proposed marina shown on plate 2 is ample by itself to supply the needed berths to support the estimate of benefits. But such statement would not recognize the craft using facilities at the head of the harbor. To clarify the situation, an additional item of local cooperation is needed that local interests will provide and maintain depths in service channels to the principal marinas and berthing areas commensurate with those provided in the Federal project. This is also applicable to the public landing, item "b" of the recommendations. Additionally, it is noted that water and fuel will be available to all on equal terms at some place other than the public landing, hence, a channel of commensurate depth to that place will be required.

4. Plate 2. It is noted that the proposed marina north of Town Wharf projects into the maneuvering basin. Care should be taken to avoid construction of any structure within a minimum of 25 feet of the project limits. The conditions of local cooperation should specify that the berths and mooring facilities are to be provided outside the dredged project limits to avoid any misunderstanding that they might be provided in the dredged 3.5 acre "maneuvering basin".

5. It is suggested that in item "g" of the local cooperation, the third word "prohibiting" be revised to "concerning".

6. Minor items noted are:

a. The datum of reference for the 6-foot depth should be mentioned in the report even though it is shown on plate 2.

b. The page numbers, referring to certain tables in paragraphs 40 to 46 inclusive, are in error. The asterisk to footnote to tabulation on page 11 has no antecedent.

c. A few errors as noted below were found in tables III and VII. However, their correction would not significantly change the percent of benefits allocated to local and general.

(1) Table III - The total number of boats is 26. The on cruise value for 15-30-foot auxiliary sail should be about \$20.

(2) Table VII - The total depreciated value of boats is \$164,100. The value of return for the 15-30-foot cruisers should be about \$4,050 (9 percent of \$45,000) and the on cruise value about \$565 (14 percent of \$4,050). Similarly, the value of return for the 31-40-foot auxiliary sail should be about \$2,000 and the on cruise value about \$360. The total benefits should be about \$5,400 in lieu of the \$4,300 shown.

7. Future reports should indicate that local interests are aware of and intend to comply with Title VI of the Civil Rights Act (ER 1130-2-314, 26 May 1967).



DEPARTMENT OF THE ARMY  
NEW ENGLAND DIVISION, CORPS OF ENGINEERS  
424 TRAPELO ROAD  
WALTHAM, MASSACHUSETTS 02154

IN REPLY REFER TO  
NEDED-R

23 June 1967

SUBJECT: Detailed Project Report for Small Navigation Project,  
Stony Creek, Branford, Connecticut

TO: Chief of Engineers  
ATTN: ENGCW-PD

1. In accordance with ER 1165-2-14, there is submitted for review and comment an advance draft of the subject report.

2. Responsible officials of the State of Connecticut and the Town of Branford concur in the recommended project and have given firm indications that the requirements of local cooperation would be met. Formal assurances of participation will be obtained from the State and Town during preparation of final design of the project.

3. The plans and specifications will be prepared in accordance with the Detailed Project Report as approved. Funds in the amount of \$11,000 for preparation of the plans and specifications and \$92,000 for the Federal share of construction will be required. The local share will be \$92,000 or ~~47.2%~~ <sup>47.3%</sup> of the estimated project cost.

4. Formal comments of the Governor of Connecticut will be requested after approval of the advance draft.

Incl  
as (12 cys)

REMI O. RENIER  
Colonel, Corps of Engineers  
Acting Division Engineer

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DETAILED PROJECT REPORT  
SMALL NAVIGATION PROJECT  
STONY CREEK, BRANFORD, CONNECTICUT

PERTINENT DATA

1. Purpose. - To provide a channel, anchorage and a turning basin of sufficient depth to meet navigation needs at Stony Creek by existing and prospective commercial and recreational craft.

2. Location. - On the north shore of Long Island Sound, about 8 miles east of New Haven, near the eastern boundary of the Town of Branford, Connecticut.

3. Existing Project. - There is no Federal project for Stony Creek. The area has not been the subject of any previous report.

4. Improvement Desired. A channel and turning basin dredged to a depth of 6 feet below m. l. w. from deep water in Long Island Sound in a general northerly direction so as to pass parallel to and 50 feet from the structure known as the Stony Creek Town Dock. Beyond the north end of the Town Dock, the channel would widen to form a turning basin and anchorage totalling about six acres in the area of the public launching ramp.

5. Recommended Improvement. - A channel 6 feet below m. l. w., 100 feet wide, extending from deep water in Long Island Sound, passing 75 feet off the Town Dock to a point 800 feet north of the Town Dock and a 3.5 acre maneuvering basin, 6 feet below m. l. w. adjacent to the head of the channel.

6. Estimated Costs

Dredging 6-foot channel and maneuvering basin 82,000 c. y. of ordinary materials @\$1.75/c. y.	\$ 144,000
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Contingencies	21,000
Engineering and Design	15,000 *
Supervision & Administration	<u>15,000</u>

Construction Total	\$ 195,000
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\*Excludes project study cost of \$17,000



7. Apportionment of First Costs:

Federal:

Corps of Engineers: 52.7% of 195,000	\$103,000
Coast Guard-aids to Navigation	<u>700</u>

Total Federal Cost	\$103,700
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Non-Federal:

Cash Contribution: 47.3% of 195,000	\$ 92,000
Public Landing (berth dredging)	<u>1,000</u>

Total Non-Federal Cost	\$ 93,000
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8. Annual Costs:

Federal:

Interest & Amortization (50 yrs @ $3\frac{1}{4}\%$ 0.04073 x 103,700)	4,200
Maintenance: channel and anchorage	8,000
Navigation Aids	<u>300</u>

Total Federal	\$12,500
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Non Federal:

Interest & Amortization (50 yrs @ $3\frac{1}{4}\%$ 0.04073 x 92,000)	<u>3,700</u>
-------------------------------------------------------------------------	--------------

Total Federal & Non-federal Annual Charges	\$16,200
--------------------------------------------	----------

9. Benefits:

	<u>General</u>	<u>Local</u>	<u>Total</u>
Damage reduction to:			
1. Fishing Fleet	2,400	0	2,400
2. Recreational fleet	2,000	2,000	4,000
Increased recreational boating	<u>19,110</u>	<u>19,110</u>	<u>38,220</u>
Total (dollars)	<u>23,510</u>	<u>21,110</u>	<u>44,620</u>
Total (percent)	52.7%	47.3%	100%

10. Benefit-Cost Ratio:

$44,620 / 16,200 = 2.8 \text{ to } 1.0$

## **11. Requirements of Local Cooperation**

a. Contribute 47.3 percent of the first cost of construction presently estimated at \$92,000.

b. Provide, maintain and operate without cost to the United States, an adequate public landing or wharf with berths and access channel commensurate to the Federal channel depth, and parking areas and other public use facilities open to all on equal terms.

c. Provide and maintain depths in service channels to the principal marinas and berthing areas commensurate with those provided in the Federal project. Slips and berthing facilities are to be constructed outside the limits of the Federal project.

d. Hold and save the United States free from damages which may result from construction and maintenance of the project.

e. Provide, without cost to the United States, all necessary lands, easements and rights-of-way, needed for the construction and subsequent maintenance of the project and ~~for~~ aids to navigation upon request of the Chief of Engineers, including suitable areas when determined by the Chief of Engineers, to be required in the general public interest for subsequent disposal of spoil, and also necessary retaining dikes, bulkheads and embankments therefor, or the costs of such retaining works.

f. Regulate the use, growth and free development of the harbor facilities so that said facilities will be open to all on equal terms.

g. Make such utility and other relocations or alterations as required for project purposes.

h. Establish regulations concerning discharge of untreated sewage, garbage, and other pollutants in the waters of the harbor by users thereof, which regulations shall be in accordance with applicable laws or regulations of Federal, State and local authorities responsible for pollution prevention and control.

DETAILED PROJECT REPORT  
SMALL NAVIGATION PROJECT  
STONY CREEK, BRANFORD, CONNECTICUT

AUTHORITY

1. This Detailed Project Report is submitted pursuant to authority contained in Section 107 of the River and Harbor Act of 1960, as amended in 1965. Specific authority was provided by 1st Indorsement dated 18 March 1965 from the Chief of Engineers based on a Reconnaissance Report dated 10 March 1965 by the Division Engineer, New England Division.

PURPOSE AND EXTENT OF STUDY

2. This study was made to determine the engineering feasibility and economic justification for providing Federal navigation improvements at Stony Creek, Connecticut. A hydrographic survey consisting of soundings and random probings was made in December 1965 from which the character of the material and estimated quantities to be dredged were determined. Other data for the study was obtained from a public hearing held on 19 November 1964, from field investigations, available maps, commercial fishing and recreational boating statistics furnished by local interests. All Federal, State and local agencies interested or affected by improvements of the harbor have been contacted. Conferences have been held with local authorities to discuss the considered improvements and requirements of local cooperation.

DESCRIPTION

3. The area under consideration is a cove adjacent to the mouth of Stony Creek, a small tidal stream located near the eastern boundary of the Town of Branford, Connecticut on the north shore of Long Island Sound. It is eight miles east of New Haven and about ninety miles north-east of New York City. About one mile offshore are the Thimble Islands, a group of more than 30 small islands, lying generally in a northeast-southwest direction.

4. The cove at Stony Creek village is protected from the north and east by the surrounding shoreline. Partial protection from south-southwest winds and wave action is obtained from several shoals, rock outcrops and the Thimble Islands. Approach to the cove is generally made directly from the south through an average depth of 4 feet, since prevailing depths in the approach from the west average only 1 to 2 feet. In the upper portions of the harbor, several acres of mud flats are exposed during periods of low tide.

5. The mean range of tide in the vicinity of Stony Creek is 5.6 feet. The spring range is 6.6 feet. The lowest tide to be expected is minus 2.5 feet mean low water. The locality is shown on United States Coast and Geodetic Survey Charts Nos. 217 and 1212 and on the maps accompanying this report.

#### TRIBUTARY AREA

6. The Town of Branford straddles the east-west Interstate Highway 95 just to the east of New Haven--an important road on the major axis of urbanization in the northeast. It is not surprising then that Branford is among the fastest growing towns in Connecticut which has been the leading growth State in New England.

Between 1950 and 1960 Branford's population increased from 10,900 to 16,600 and climbed to 19,200 by 1965. The town gained 23 manufacturing establishments during the 1950's. Manufactured products include wearing apparel, metal castings, drawn wire, and screw machines. Its manufacturing employment reached 2000 in 1962. This was somewhat higher than the 1700 employed in non-manufacturing activities. About as many more, commute to work in the greater New Haven area. Per Capita incomes in Branford are among the highest in Connecticut which in turn has the highest of any state in the Nation. Continued strong growth seems certain. There is plenty of space in the town for growth; and State Planners project the New Haven Area to grow by 70 to 100 percent between now and the turn of the century.

7. The village of Stony Creek and the recreation area it services will undoubtedly feel the pressures of this growth, both in terms of space and the recreation related services required by town people and outsiders. This village adjacent to the harbor, is home base for year round and summer people. Many of the year round residents cater to summer recreation seekers. The single industrial activity is shipment of trap rock by the New Haven Trap Rock Company from their dock located about three-quarters of a mile west of Stony Creek. Inland from the harbor there is a small amount of truck farming. The area is served by a network of roads and the shoreline route of the New York - New Haven and Hartford Railroad. The Branford Steam Railway, a subsidiary of the New Haven Trap Rock Company, hauls crushed stone from its quarry in North Branford to dockside at Juniper Point for shipment throughout the Long Island Sound area.

8. The nearest adjacent harbors for small fishing and recreational craft are the privately improved Pine Orchard Yacht Basin, one mile to the west and Guilford Harbor, 5 miles to the east. Branford Harbor, three miles west of Stony Creek has been improved by the Federal Government. The present demand for boating facilities in Connecticut and the increase in leisure time and money available for recreational boating has contributed greatly to the present need for additional facilities for recreational craft in the area. Specifically, the facilities in existing improved harbors are used to capacity and additional area is needed. Stony Creek has public shore access already available making it a logical site for navigation improvement.

#### BRIDGES

9. There are no bridges crossing any portion of the waterway under consideration in this report.

#### PRIOR REPORTS

10. There has been no prior report on Stony Creek, and no Federal project has ever been adopted for improvement of the harbor.

#### EXISTING PROJECTS

11. There are no Federal navigation projects in the immediate vicinity of Stony Creek. An unfavorable report was made in 1891 for navigation improvement of the entrance to a tidal creek referred to as Stony Creek River, east of Bear Island and Hoadly Point.

12. The nearest existing Federal navigation project is at Branford Harbor, three miles to the west. This project consists of a channel 8.5 feet deep, 100 feet wide from the outer harbor to the highway bridge at Indian Neck Road, a distance of about 2.3 miles.

13. A preliminary examination of Pine Orchard Harbor for the purpose of developing a Federal anchorage for recreational craft was made in 1956. The study found that local interests were not prepared to provide a public landing which would permit full public access to the improvement. No project was recommended. A report unfavorable to the development of a Federal project in the channel leading to the New Haven Trap Rock Company was made in 1957.

## LOCAL COOPERATION ON EXISTING AND PRIOR PROJECTS

14. There is no existing project in Stony Creek.

### OTHER IMPROVEMENTS

15. The Town of Branford has built and maintains in good repair a T-wharf of timber pile at Stony Creek village. The wharf is leased to the Stony Creek Boating Association, a community group. This organization regulates the use of the dock by local residents. Legislation by the State of Connecticut (Special Laws of Connecticut, Volume 13, Page 882) requires that the Town provide 3 feet of water at low tide at the dock. Adjacent to the road leading to the Town Wharf is a launching ramp available to the public. This ramp can be used only during a small period of the daily tide cycle, and expansion of this facility would depend on the provision of greater depths of water.

### TERMINAL AND TRANSFER FACILITIES

16. The public dock at Stony Creek is equipped with two landing floats which are placed alongside the wharf during the boating season for convenience of the public. Parking facilities are available adjacent to the pier, but no provision is made for water, fuel, or supplies. The dock is available to and used by all craft in the harbor. In a number of instances, disabled craft have been brought to the dock by the Coast Guard, to await repairs. At high tide these boats are moved upstream to repair facilities.

17. There are two marinas and a boatyard in the harbor with total storage area for 125 boats. The marinas provide water, fuel and repairs. Adjacent to one marina is the public launching ramp. The Stony Creek Boating Association, operates a portion of the waterfront for small boat landing. The association also maintains mooring stakes with pulley line system in an area 100 feet by 350 feet northeast of Frisbee Island where depths at the moorings range from 10 inches to 5 feet. The number of boats in the club fleet is approximately 160. The Association has stated its intention to construct marina type facilities with a capacity for 100 small craft, adjacent to Indian Point Road, north of the town dock.

18. A lobster company and an oyster company operate landings within the harbor. They haul fuel and supplies by truck or use facilities at New Haven for services as local facilities are frequently tide-bound.

## IMPROVEMENTS DESIRED

19. A public hearing was held in Branford on 19 November 1964 in order to give interested parties an opportunity to express their views concerning navigation improvement of Stony Creek Harbor. The hearing was attended by State and Town officials and representatives of various recreational and commercial interests. Substantial data was presented by a spokesman for the Stony Creek Boating Association. He explained the difficulties experienced by fishing and recreational craft in using the harbor and indicated the anticipated expansion of these fleets in the event of improvement.

20. The major navigation problem cited is the lack of depth. To improve conditions in the harbor, local interests requested a channel, 6 feet deep, of unspecified width, from deep water in Long Island Sound, in a general northerly direction so as to pass parallel to and fifty feet off the Stony Creek Town Dock. Beyond the north end of this structure the channel would be widened to form an anchorage and turning basin of about six acres to accommodate transient recreational craft and provide access to adjacent marinas, boatyards and the public launching ramp.

21. The effect of this improvement would be to permit access to the shore facilities at Stony Creek at nearly all stages of tide for most of the vessels now using the Thimble Islands anchorages and waterways. It would also eliminate the shoal condition of the present channel which hampers the operation of the ferry which runs to the Thimble Islands, charter and commercial craft, sightseeing boats, livery boats and pleasure craft which operate out of Stony Creek. Local residents believe this improvement would almost double the use of the boat launching ramp and public boat livery service. The turning basin is considered necessary as the channel alone would not provide sufficient maneuvering room. They also consider it possible that the channel would reverse the tendency of the area to silt and restore the depths that are reported to have prevailed in the harbor.

## EXISTING AND PROSPECTIVE COMMERCE

22. There are presently eleven fishing boats operating out of Stony Creek. Nine of these are lobster boats, one a combination lobster and fishing boat and one a seiner. They range in length from 16 feet to 32 feet and up to 2-1/2 feet in draft. The combined present value of these vessels is estimated to be about ten thousand dollars. It is estimated that the annual lobster catch runs between 18,000 and 24,000 pounds and that additional winkle catches run between one and two thousand bushels.

Local interests have stated that Stony Creek formerly enjoyed a fishing fleet more than three times the size of the present fleet. They expect that an improvement of the harbor would restore the fleet to this size. However, the U. S. Fish and Wildlife Service reports that improvement of the harbor would not result in any noticeable increase in lobster trapping efforts or landings due to a lack of convenient fishing grounds.

23. Few outside based commercial vessels use Stony Creek, except in emergencies; as the existing shoal and tidal conditions render the inner harbor impassable during a large portion of any tidal cycle. Local interests believe that if improvement were made it would attract many of the draggers and oyster boats plying nearby waters. As fuel and repairs are not available within six miles of Stony Creek, it would be advantageous for them to stop here overnight or perhaps make Stony Creek their permanent base.

24. One of the most important oyster grounds in Long Island Sound is found along the coastline off Stony Creek. This area is one of two unpolluted areas along the Connecticut coast which is presently used for maturing oysters. The growing grounds encompass the entire Thimble Islands and extend inland to Burr Island adjacent to Stony Creek. These beds are worked regularly, and comprise a valuable resource of significant importance to the local economy. Although the oyster grounds are closely associated with Stony Creek, oysters are not landed at the town wharf. Hard shell clams are harvested intermittently in these waters by a single commercial operator.

25. Sport fishing boats operate out of the harbor. These boats use the town dock and a local marina. Charter fishing parties range from 6 to 18 people. There are also now four vessels, operating on a charter basis, engaged in Thimble Island sightseeing tours. They range in length from 20 feet to 40 feet. Sightseeing tours by the larger boats average 25 passengers per trip, carrying several thousand visitors each season. Also operating in the harbor is a public livery service with about thirty boats. Local interests consider that these boats would benefit from harbor improvement by increased access to fuel supplies and a tendency to enlarge the fleet.



26. Ferry service to offshore islands consists of one vessel operating from the town dock. The ferry operates hourly throughout the day and late evening, and is subject to emergency calls 24-hours a day. The season runs from April to November. This vessel is used by most of the island inhabitants and is often the only means of access. It carries the majority of freight as well as fire fighting equipment and other emergency supplies.

#### VESSEL TRIPS

27. There are no statistics on the number of trips in the waterways by either pleasure or fishing craft. Thirty of the Thimble Islands are inhabited, with ninety-five homes on the islands, supporting a seasonal population of several hundred. The season extends from early spring to late fall. Residents of these islands are completely dependent on access to Stony Creek waterfront facilities. Access is achieved by hourly ferry service and by private boat. The ferry is also used for island emergency service. Sightseeing boats make tours through the islands working out of Stony Creek carrying several thousand passengers annually. As well as being scenic, the islands offer several excellent protected anchorages, which attract a large number of transient vessels during the summer season. Many local pleasure craft, some moored at Stony Creek, some from the islands and some from adjacent yacht centers depend on the facilities at Stony Creek.

28. The Stony Creek Boating Association maintains staked moorings for their members off Burr Island. The Association fleet totals 160 outboard cruisers and sailboats ranging in size from 10 to 28 feet. Other local residents using the harbor moor 134 recreational boats of which nearly half are outboards, cruisers and sailboats. The Thimble Island Sailing Club with a 27 boat membership use the facilities at Stony Creek for meeting guests, fuel, supplies, and emergency repairs. In addition, there are 79 non-member craft in the islands which use the wharf. Local residents report approximately 310 outboards, cruisers and auxiliary sailboats visit Stony Creek each week during the boating season for stays of one to 2 days:

## DIFFICULTIES ATTENDING NAVIGATION

29. The principal difficulty at Stony Creek is gradual silting of the natural access channel and anchorage in the vicinity of the town wharf. The controlling depth in the channel is about 3 feet, just east of Frisbie Island. The anchorage area is mostly exposed at low water. The public wharf has depths alongside of about 2 to 3 feet at mean low water. Access to the majority of marine facilities in the area is available for about four hours in any twenty-four hour period and is limited to craft drawing less than 2.5 feet. During periods of low water, the island ferry frequently churns mud in the present channel and has had to be repaired on several occasions because of damage sustained in the shoal areas. One marina owner claims that the average boatman is reluctant to come into Stony Creek for needed repairs of supplies because there is no established channel to the facilities. Activities of commercial and recreational craft in the entire area is restricted during stages of low water and boats sustain damages while attempting to reach supply and launching facilities. Improvement of the harbor would provide a needed harbor for small craft in addition to reducing navigational hazards.

## WATER POWER AND OTHER SPECIAL SUBJECTS

30. The entire waterway under consideration is tidal. There are no problems involved in this study pertaining to water power, flood control, pollution, or related subjects. The U. S. Fish and Wildlife Service has furnished a report which states that the navigation improvement as proposed would not significantly affect fish and wildlife resources.

## PROJECT FORMULATION

30.1 The existing recreational fleet consists of 310 boats, of which 224 are based at Stony Creek and 86 in the outlying Thimble Islands. In addition, over 300 transient craft visit the harbor during the boating season for lengths of stay up to two days which is the equivalent of 48 locally based boats. If improvement were provided, it would be expected that 26 boats would transfer to Stony Creek from nearby areas, that 35 new boats would locate in the harbor within 5 years of the improvement, that 38 additional equivalent transient boats would be attracted to visit the harbor, and that 50 new boats would be added over the 50-year life of the project. The ultimate demand, therefore would be over 500 spaces. Local interests feel that all of the demand can be met by expansion of existing marinas and construction of new marinas provided access to deep water is made available.

Since the majority of craft using or expected to use the harbor have shallow drafts, a depth of no more than 6 feet, mlw, was deemed necessary.

In view of the amount of traffic expected in and out of the harbor on peak weekends, a channel width of 100 feet was considered a safe minimum. Since many of the boats visiting Stony Creek from the outlying Thimble Islands make short trips to Branford for provisions, local interests expressed a need for a small maneuvering basin in the vicinity of the Town landing. A 3- $\frac{1}{2}$  acre maneuvering basin could be provided by removal of ordinary materials. In view of these aspects, it was determined that access to deep water by provision of a 6-foot deep channel and provision of a 3- $\frac{1}{2}$  acre maneuvering basin in the vicinity of the Town Pier would generate the maximum net benefits and provide a plan with the largest b/c ratio.

### PLAN OF IMPROVEMENT

31. Stony Creek Harbor has inadequate depths in the channel approach from Long Island Sound to the Town Dock and insufficient depth in the existing anchorage to enable full use of the harbor by the existing locally based and transient recreational fleets. Commercial vessels operating from the harbor experience considerable tidal delays and are forced to thread their way through moored boats in approaching the public wharf with collisions or grounding often occurring.

32. The total harbor area available to develop anchorage area amounts to about 22 acres of which more than 60 percent is presently bare at low water. At least 200,000 cubic yards of material including substantial rock would have to be removed to provide anchorage of adequate depth throughout the harbor. It is apparent that this type of improvement would not provide the most efficient project. Under present conditions with craft averaging 25 feet in length and mooring with one anchor in free overlapping circles, the anchorage is considered to be saturated when there are 12 boats per acre. Thus, the harbor at best could provide anchorage for only 264 craft. The existing recreational fleet based in the harbor and those boats located in the Thimble Islands using the harbor for anchorage total 310 craft. Dredging the harbor alone, therefore, would not provide sufficient room for the existing fleet nor for any future expansion. It is considered that full development of the harbor cannot be provided by anchorages but is dependent upon added marina facilities. Expansion of existing marinas and new marina development have been limited due to lack of access to deep water. Local marina operators have given firm indications that if access is provided, new marina facilities would be constructed and existing facilities expanded. Improvement can be accomplished by providing a channel to the Town wharf and a maneuvering area for island and transient craft north of the wharf. It is expected that the ultimate demand for 500 spaces for the 50-year life of the project will be met by the additional marina development.

33. In conjunction with the foregoing, the plan of improvement presented by local interests at the public hearing, has been considered in this study. The plan of improvement resulting from the study is based on hydrographic surveys, including soundings and probings made in December 1965. The plan would provide an entrance channel 6 feet below mlw, 100 feet wide from deep water in Long Island Sound, in a general northerly direction to a point 75 feet off the Town wharf with the head of the channel 800 feet north of the wharf, a distance of 1800 feet and a maneuvering basin totalling 3.5 acres, 6 feet below mlw adjacent to the channel north of the dock. The plan would eliminate tidal delays, hazards of grounding and collision, and encourage marina development within the harbor.

34. State and local officials have been consulted on the suitability of this plan of improvement. They have indicated that the plan meets their present needs.

#### SHORELINE CHANGES

35. The shores of the harbor are composed of rock outcroppings and boulders fronted by mud flats at low tide. The plan of improvement involves an access channel to the town dock and a maneuvering basin. This improvement will have no adverse effect on the configuration of the adjacent shoreline.

#### REQUIRED AIDS TO NAVIGATION

36. The Third Coast Guard District has been consulted and has advised that aids to navigation will be required. For the plan of improvements it was estimated that these aids would cost \$700 and \$300 annually for maintenance.

#### ESTIMATES OF FIRST COSTS

37. Federal construction under the proposed plan of improvement would consist of the removal and disposal of ordinary materials to provide for a channel and maneuvering basin at Stony Creek. Local interests would be responsible for dredging a berthing area at the public landing and protection of oyster beds, during the dredging operations of the Federal project. The U.S. Coast Guard would provide necessary navigation aids. The estimate is based on removal of material by bucket dredge and scow, with disposal of materials on an approved dumping ground in Long Island Sound. Dredging quantities are in terms of in-place measurement, with one foot overdepth and 1 on 3 side slopes. The estimated first cost is based on January 1967 price levels and includes an allowance for contingencies.

## PROJECT COST ESTIMATE

Cost Acct. <u>No.</u>	<u>Item</u>	<u>Project Features</u> (6' Channel and anchorage)
09	Dredging (ordinary materials) Quantity 82,000 c. y. Unit Price 1.75 c. y.	\$144,000
	Contingencies	21,000
30	Engineering & Design	15,000*
31	Supervision & Administration	<u>15,000</u>
	Total First Cost of Construction	\$195,000
	Aids to Navigation (Coast Guard)	<u>700</u>
	Total Project Cost (Federal and Non-Federal)	\$195,700

\*Excludes \$17,000 for project study cost.

### ESTIMATES OF BENEFITS

38. Improvement of Stony Creek Harbor would result in substantial benefits to the existing and prospective recreational and fishing fleets locally based in Stony Creek and the Thimble Islands. It would eliminate shoal conditions which hamper the operation of the island ferry, charter, sightseeing and fishing boats. Shore facilities would become available at all stages of the tide. Benefits will also accrue from improved accommodations for transient pleasure craft and a reduction of damages to boats using the harbor.

39. Recreational benefits have been computed on the basis of annual net return to the owners, if the boats were "for hire". This net return varies with the size and type of boat and is expressed in terms of its average depreciated value. The ideal net return is considered the maximum return that could be obtained with full unrestricted use of the harbor. For this particular harbor, the ideal net return varies from 13 percent for the smaller boats to 8 percent for the large craft. This variation in the ideal percentage is based on the length of season, concentration of population, costs of alternative types of outdoor recreation and income range of the using public.

An estimate was made of the percent of optimum use which could be received under the proposed improvement. The difference or gain between the two conditions was considered to be the benefit. A net gain in percent return was taken for shallow draft outboards as well as the larger cruisers, because of the lack of adequate depth and restricted mooring conditions.

40. The existing locally based recreational fleet consists of 294 boats of which 70 are rowboats of such size and draft that sufficient natural depths of water are available between the shore and the proposed project limits. The remaining 224 boats would benefit substantially from harbor improvements. Nearly all of the locally based fleet should be berthed in marinas adjacent to the project leaving the maneuvering basin open for use by Thimble Island residents and other transient craft. A detailed evaluation of benefits for the locally based fleet amounting to \$5220 annually is shown in Table I. (pg. 13)

41. There are 86 boats located among the 30 inhabited islands in the Thimble group that would benefit from improvement of Stony Creek Harbor. Residents of the 95 homes on the islands are completely dependent on access to Stony Creek waterfront facilities. Annual benefits accruing to the island fleet are shown in Table II, (pg. 14) and amount to \$1095.

42. With harbor improvement, it is expected that better use will be made of existing marina developments located adjacent to the proposed maneuvering basin. Construction of additional marina facilities is anticipated upon completion of the improvement which would serve to attract boat owners to the harbor. An estimated 25 boats, mostly larger craft now based elsewhere in the area, would transfer to Stony Creek. It is considered that these boats at their present location now receive the same net return as the local fleet. The benefits from this source would amount to \$2,125 annually (See Table III, (pg. 15))

43. It is estimated that soon after completion and as a direct result of the harbor improvement, 35 new boats will be purchased and added to the local fleet. Ten of these boats will be outboards of shallow draft. Because of the proximity of the existing public ramp to the proposed project, these new boats would be attracted by the full accessibility to the water at all tide stages. Annual benefits for a total of 35 new boats have been computed at \$16,145 (See Table IV pg 16)

TABLE I-BENEFITS TO RECREATIONAL BOATING  
HARBOR: STONY CREEK, BRANFORD, CONN. (Locally Based Fleet)

(140 days season)

Type of Craft	Length (feet)	No. Of Boats	Depreciated Value		Percent Return				Value \$	On Cruise		
			Average	Total	Ideal	% of Ideal		Gain		Avg Days	% of Season	Value \$
						Pres.	Future					
RECREATIONAL FLEET												
Outboards	10-20	175	600	105,000	13	85	100	1.9	1995	-	-	-
Inboards	10-20	3	1,200	3,600	11	85	100	1.7	60	-	-	-
Cruisers	15-30	25	4,600	115,000	9	80	100	1.8	2070	20	14	290
	31-50	2	17,500	35,000	8	75	100	2.0	700	25	18	125
	51-60	-	-	-	-	-	-	-	-	-	-	-
Aux Sail	15-30	-	-	-	-	-	-	-	-	-	-	-
	31-40	-	-	-	-	-	-	-	-	-	-	-
	41-60	-	-	-	-	-	-	-	-	-	-	-
Sailboats	10-20	16	860	13,800	12	85	100	1.8	250	-	-	-
	21-30	-	-	-	-	-	-	-	-	-	-	-
	31-40	-	-	-	-	-	-	-	-	-	-	-
	41-60	-	-	-	-	-	-	-	-	-	-	-
CHARTER BOATS												
Cruisers	21-35	2	5,000	10,000	15	80	100	3.0	300	-	-	-
	36-50	1	7,000	7,000	15	75	100	3.7	260	-	-	-
	51-100	-	-	-	-	-	-	-	-	-	-	-
TOTALS		224		\$ 289,400					\$5635			\$415
	Rowboats	70										
		294										

Total Benefits = \$5635 - 415 = \$5220

TABLE II-BENEFITS TO RECREATIONAL BOATING  
HAR BOR: STONY CREEK, BRANFORD, CONN. ( Thimble Islands Fleet)

(140 days season)

Type of Craft	Length (feet)	No. of Boats	Depreciated Value		Percent Return				Value \$	On Cruise		
			Average	Total	Ideal	% of Ideal		Gain		Avg. Days	% of Season	Value \$
						Pres.	Future					
<u>RECREATIONAL FLEET</u>												
Outboards	10-20	46	900	41,400	13	85	100	1.9	785	30	21	165
Inboards	10-20	4	1,150	4,600	11	85	100	1.7	80	30	21	15
Cruisers	15-30	-	-	-	-	-	-	-	-	-	-	-
	31-50	1	10,000	10,000	8	75	100	2.0	200	30	21	40
	51-60	-	-	-	-	-	-	-	-	-	-	-
Aux Sail	15-30	-	-	-	-	-	-	-	-	-	-	-
	31-40	-	-	-	-	-	-	-	-	-	-	-
	41-60	-	-	-	-	-	-	-	-	-	-	-
Sailboats	10-20	35	500	17,500	12	85	100	1.8	315	30	21	65
	21-30	-	-	-	-	-	-	-	-	-	-	-
	31-40	-	-	-	-	-	-	-	-	-	-	-
	41-60	-	-	-	-	-	-	-	-	-	-	-
TOTALS		86		\$73,500					\$1,380			\$285
	Rowboats	<u>20</u>										
		106										

Total Benefits = \$1380 - 285 = \$1095



TABLE III-BENEFITS TO RECREATIONAL BOATING  
HARBOR: STONY CREEK, BRANFORD, CONN. (Transferred Boats)

(140 days season)

Type of Craft	Length (feet)	No. of Boats	Depreciated Value		Percent Return				Value \$	On Cruise		
			Average	Total	Ideal	% of Ideal		Gain		Avg. Days	% of Season	Value \$
						Pres.	Future					
RECREATIONAL FLEET												
Outboards	10-20	8	800	6,400	13	85	100	1.9	120	-	-	-
Inboards	10-20	-	-	-	-	-	-	-	-	-	-	-
Cruisers	15-30	3	6,000	18,000	9	80	100	1.8	325	20	14	45
	31-50	3	17,000	51,000	8	75	100	2.0	1020	25	18	185
	51-60	-	-	-	-	-	-	-	-	-	-	-
Aux. Sail	15-30	2	5,000	10,000	9	85	100	1.3	130	20	14	20
	31-40	3	8,500	25,500	8	80	100	1.6	410	25	18	75
	41-60	-	-	-	-	-	-	-	-	-	-	-
Sailboats	10-20	5	800	4,000	12	85	100	1.8	70	-	-	-
	21-30	-	-	-	-	-	-	-	-	-	-	-
	31-40	-	-	-	-	-	-	-	-	-	-	-
	41-60	-	-	-	-	-	-	-	-	-	-	-
CHARTER BOATS												
Cruisers	21-35	1	5,000	5,000	15	85	100	2.3	115	-	-	-
	36-50	1	7,000	7,000	15	75	100	3.7	260	-	-	-
	51-100	-	-	-	-	-	-	-	-	-	-	-
TOTALS		26	\$ 126,900						\$2450	\$325		

Total Benefits = \$2450 - 325=2125

TABLE IV-BENEFITS TO RECREATIONAL BOATING  
HARBOR: STONY CREEK, BRANFORD, CONN.

(New Boats)

(140 days season)

Type of Craft	Length (feet)	No. of Boats	Depreciated Value		Percent Return				Value \$	On Cruise		
			Average	Total	Ideal	% of Ideal		Gain		Avg. Days	% of Season	Value \$
						Pres.	Future					
RECREATIONAL FLEET												
Outboards	10-20	10	1,200	12,000	13	0	100	13	1,560	-	-	-
Inboards	10-20	1	3,000	3,000	11	0	100	11	330	-	-	-
Cruisers	15-30	3	7,000	21,000	9	0	100	9	1,890	20	14	265
	31-50	4	15,000	60,000	8	0	100	8	4,800	25	18	865
	51-60	-	-	-	-	-	-	-	-	-	-	-
Aux. Sail	15-30	6	8,000	48,000	9	0	100	9	4,320	20	14	605
	31-40	3	12,000	36,000	8	0	100	8	2,880	25	18	520
	41-60	-	-	-	-	-	-	-	-	-	-	-
Sailboats	10-20	6	1,500	9,000	12	0	100	12	1,080	-	-	-
	21-30	2	7,000	14,000	11	0	100	11	1,540	-	-	-
	31-40	-	-	-	-	-	-	-	-	-	-	-
	41-60	-	-	-	-	-	-	-	-	-	-	-
TOTALS		35	\$ 203,000						\$ 18,400	\$2255		

\$18,400 - 2255 = \$16,145

44. Local interests have estimated that approximately 150 outboards, 60 cruisers and 100 auxiliary sailboats visit Stony Creek each week for about 20 weeks of the boating season. The average length of stay for the outboards and auxiliary sailboats is one day for a total of 5000 boat-days each season. Based on a season of 140 days, this is equivalent to 35 locally based boats. One -half of the cruisers stay in port for one day and one half for two days for a total of 1800 boat-days or an equivalent of 13 locally based boats. The total existing transient fleet is equal to 48 locally based boats. Benefits for these boats have been computed on the same basis as the local fleet and amount to \$4785 annually (See Table V pg. 18)

45. After improvement, it is estimated that the transient recreational fleet will increase by at least 80 percent. Local interests have stated that at one time the anchorage at Stony Creek was a routine stop for the New York Yacht Club cruises. Benefits resulting from attracting new transient craft will amount to \$3475 annually (See Table VI pg. 19);

46. Without navigation improvement, growth of the local fleet will be severely limited by lack of maneuvering space and access to the marina facilities. A very conservative estimate of growth of the local recreational fleet is one boat per year with harbor improvement. It is assumed that these boats would be uniformly added to the fleet over the 50-year life of a Federal project, so that the benefit would increase uniformly from zero, when the project is constructed to \$11,130 at the end of 50 years. The equivalent average annual benefit from the growth of the fleet is estimated to be about \$5,375 (See Table VII pg. 20)

47. The location of the proposed anchorage north of the town dock would offer considerable protection during most storms except those from the southwest. Damages that occur to the recreational fleet under existing conditions are caused by storm wave action and running aground while attempting to navigate the approach to the Town dock at low water. The annual damage is estimated to be \$100 per boat. The proposed improvement is expected to eliminate damages due to grounding but not the damages caused by storm waves. It is considered that approximately one-half of the damage is caused by running aground and that about one-third of the fleet or 80 boats experience this type of damage each year. The annual benefit would be (80 x \$50) or \$4,000.

TABLE V BENEFITS TO RECREATIONAL BOATING  
HARBOR: STONY CREEK, BRANFORD, CONN. ( Existing Equivalent Transients)

(140 days)

Type of Craft	Length (feet)	No. of Boats	Depreciated Value		Percent Return				Value \$	On Cruise		
			Average	Total	Ideal	% of Ideal		Gain		Avg. Days	% of Season	Value \$
						Pres.	Future					
RECREATIONAL FLEET												
Outboards	10-20	20	900	18,000	13	85	100	1.9	340	-	-	-
Inboards	10-20	-	-	-	-	-	-	-	-	-	-	-
Cruisers	15-30	8	6,000	48,000	9	80	100	1.8	865	-	-	-
	31-50	7	17,000	119,000	8	75	100	2.0	2380	-	-	-
	51-60	-	-	-	-	-	-	-	-	-	-	-
Aux. Sail	15-30	8	5,000	40,000	9	85	100	1.3	520	-	-	-
	31-40	5	8,500	42,500	8	80	100	1.6	680	-	-	-
	41-60	-	-	-	-	-	-	-	-	-	-	-
Sailboats	10-20	-	-	-	-	-	-	-	-	-	-	-
	21-30	-	-	-	-	-	-	-	-	-	-	-
	31-40	-	-	-	-	-	-	-	-	-	-	-
	41-60	-	-	-	-	-	-	-	-	-	-	-
TOTALS		48		\$267,500					\$4785			

TABLE VI BENEFITS TO RECREATIONAL BOATING  
HARBOR: STONY CREEK, BRANFORD, CONN. (Attracted Equivalent Transients)

(140 days season)

Type of Craft	Length (feet)	No. of Boats	Depreciated Value		Percent Return				Value \$	On Cruise		
			Average	Total	Ideal	% of Ideal		Gain		Avg. Days	% of Season	Value \$
						Pres.	Future					
RECREATIONAL FLEET												
Outboards	10-20	14	900	12,600	13	85	100	1.9	210	-	-	-
Inboards	10-20	-	-	-	-	-	-	-	-	-	-	-
Cruisers	15-30	5	6000	30,000	9	80	100	1.8	540	-	-	-
	31-50	4	17000	68,000	8	75	100	2.0	1360	-	-	-
	51-60	-	-	-	-	-	-	-	-	-	-	-
Aux. Sail	13-30	6	5000	30,000	9	85	100	1.3	390	-	-	-
	31-40	5	8500	42,500	8	80	100	1.6	680	-	-	-
	41-60	-	-	-	-	-	-	-	-	-	-	-
Sailboats	10-20	-	-	-	-	-	-	-	-	-	-	-
	21-30	4	3000	12,000	11	80	100	2.2	265	-	-	-
	31-40	-	-	-	-	-	-	-	-	-	-	-
	41-60	-	-	-	-	-	-	-	-	-	-	-
TOTALS		38		\$195,100					\$3,475			

TABLE VII-BENEFITS TO RECREATIONAL BOATING  
HARBOR: STONY CREEK, BRANFORD, CONN. (NORMAL GROWTH-50)

(140 days season)

Type of Craft	Length (feet)	No. of Boats	Depreciated Value		Percent Return				Value · \$	On Cruise			
			Average	Total	Ideal	% of Ideal		Gain		Avg. Days	% of Season	Value	
						Pres.	Future						
RECREATIONAL FLEET													
Outboards	10-20	20	950	19,000	13	0	100	13	2470	-	-	-	
Inboards	10-20	3	3,000	9,000	11	0	100	11	990	-	-	-	
Cruisers	15-30	5	9,000	45,000	9	0	100	9	4,050	20	14	565	
	31-50	1	17,500	17,500	8	0	100	8	1400	25	18	250	
	51-60												
Aux. Sail	15-30	3	5,000	15,000	9	0	100	9	1350	20	14	190	
	31-40	3	3,500	25,000	8	0	100	8	2000	25	18	360	
	41-60	1	18,000	18,000	8	0	100	8	1440	25	18	260	
Sailboats	10-20	12	800	9,600	12	0	100	12	1150	-	-	-	
	21-30	2	3,000	6,000	11	0	100	11	660	-	-	-	
TOTALS		50		\$164,100					\$15,510			\$1,625	

TOTAL BENEFITS = \$15,510 - 1,625 = 13.885 x 0.387 = \$5,375

48. The tangible benefit evaluated for the commercial fishing boats and the island ferry consists of reduction of damages caused by running aground while operating in the harbor at low water stages and from pounding on the bottom of the harbor from wave action during storms. At the present time there are eleven commercial vessels operating out of Stony Creek. Nine of these are lobster boats, one a combination lobster and fishing boat, and one a seiner. They vary in length from 16 feet to 32 feet with drafts up to 2 1/2 feet. The ferry boat draws 3' to 4" when loaded. The owner of this ferry stated at the public hearing, that he has experienced considerable difficulty in reaching the Town wharf at low water, particularly in rough weather. On several occasions he has had to move passengers forward in order to lift the stern enough to dig his way into the dock. Over the years, he has ruined propellers and shafts and filled the engine with mud. Necessary repairs have amounted to an average of \$300 per year with the boat tied up for 3 or 4 days at a time. One oyster boat, the "Mildred" was blown onto the rocks near Flying Point and lost during a storm in November 1963. The owners claim no loss would have occurred had a deeper channel approach to the shelter of the Town dock been available. It has been estimated that the proposed improvement would prevent an average of \$200 damage to each of the 12 commercial vessels, for a total of \$2400 per year.

49. The U. S. Fish and Wildlife Service indicates that harbor improvement could result in some slight benefits to the lobster fishermen. These benefits, however, would not be significant and would most likely be realized in terms of convenience, creating conditions that would make it somewhat easier for the fishermen to carry out their in-harbor routine. The improvement is not expected to result in any noticeable increase in lobster trapping effort or landings.

50. The evaluated benefits for improvement of Stony Creek Harbor are summarized below:

#### Summary of Annual Benefits

<u>Type of Benefit</u>	<u>Allocated Benefits</u>		
	Total	General	Local
Damage reduction to:			
1. Fishing fleet and ferry	2,400	2,400	0
2. Recreational Fleet	4,000	2,000	2,000
Increased recreational boating	<u>38,220</u>	<u>19,110</u>	<u>19,110</u>
Total (dollars)	44,620	23,510	21,110
Total (percent)	100%	52.7%	47.3%

## APPORTIONMENT OF COSTS AMONG INTERESTS

51. The first cost of construction of the recommended improvement is apportioned between the Federal Government and local interests in accordance with the percentage of general and local benefits to be derived. All commercial fishing benefits are considered to be general in nature while recreational benefits are divided equally between Federal and local interests. The cost of providing berthing space at the public landing is considered to be a local self-liquidating expense. The first costs of construction of the proposed improvement as shown in paragraph 37 are apportioned as 52.7% Federal and 47.3% local.

### Federal Investment

Corps of Engineers 52.7% of 195,000	103,000
U. S. Coast Guard: Navigation Aids	700
Total Federal	<u>\$103,700</u>

### Non-Federal Investment

Cash Contribution 47.3% of 195,000	92,000
Public Landing (berth dredging)	<u>1,000</u>
Total Non-Federal	<u>\$93,000</u>

## ESTIMATE OF ANNUAL CHARGES

52. Annual charges are based on an estimated project life of 50 years and an interest rate of  $3\frac{1}{4}$  % for both Federal and Non-Federal charges. The non-Federal investment has been based on an apportionment of costs commensurate with local benefits. A cash contribution of 47.3 percent of the first cost of construction should be required of local interests for the Federal project. The estimate for maintenance dredging costs in the channel and maneuvering basin is based on past experience in shoaling rates of similar areas. It is estimated that the project will shoal at the rate of 0.3 feet per year or approximately 4,000 cubic yards annually.

53. Construction of the berthing area and maintenance of the public landing are considered self-liquidating through user charges and are not included in the estimate of annual charges. Annual charges have been computed as follows:



### Federal Annual Charges

Federal investment	\$103,700	
Interest & Amortization	(0.04073 x \$103,700)	\$4,200
Dredging, Maintenance		8,000
Navigation Aids		300
Total Federal		<u>\$12,500</u>

### Non-Federal Annual Charges

Interest & Amortization	(0.04073 x \$92,000)	3,700
Total Federal & Non-Federal Annual Charges		<u>\$16,200</u>

### COMPARISON OF BENEFITS AND COSTS

54. A comparison of the estimated benefits of 44,620 and the annual charges of \$16,200 result in a benefit-cost ratio of 2.8 to 1.0.

### PROPOSED LOCAL COOPERATION

55. The benefits to be derived from the dredging of a channel and anchorage area are 52.7 percent general and 47.3 percent local in nature, those accruing to commercial fishing and operation of the Thimble Islands ferry being entirely general and those accruing to recreational and charter boats being 50 percent general and 50 percent local. Local interests will bear a share of the first cost of the proposed improvement in proportion to the ratio of local to total benefits, and will be required to contribute in cash, 47.3 percent of the construction cost of the Federal project. This local cash contribution is presently estimated to be \$92,000.

56. The Town Dock is available to all craft in the harbor. Use of the landing is regulated by the Stony Creek Boating Association, a community group that has leased the wharf from the town. Local interests will be required to provide and maintain without cost to the United States, an adequate public landing with piers, floats and mooring facilities, as needed for transient and local boats, including dredged berthing areas alongside the wharf at a depth commensurate to the Federal project, open to all on equal terms. Local interests would also have to provide and maintain depths in service channels to the principal marinas and berthing areas commensurate with those provided in the Federal project. Slips and berthing facilities are to be constructed outside the limits of the Federal project.

57. In addition, local interests will be required to provide without cost to the United States adequate parking areas and other necessary shore facilities. They will furnish all lands, easements and rights-of-way required for construction and subsequent maintenance of the project and for aids to navigation upon the request of the Chief of Engineers, including suitable areas when determined by the Chief of Engineers to be required in the general public interest for subsequent disposal of spoil, and also necessary retaining dikes, bulkheads and embankments therefor or the costs of such retaining works. Local interests will hold and save the United States free from damages due to the construction works, and make utility or other relocations and alterations as required for project purposes.

58. Local interests will establish regulations concerning discharge of untreated sewage, garbage, and other pollutants in the waters of the harbor by users thereof, which regulations shall be in accordance with applicable laws or regulations of Federal State and local authorities responsible for pollution, prevention and control. Local interests have been consulted and have provided reasonable assurances that the above described requirements of local cooperation will be met. Comments of State and local officials are included in Appendix C.

#### COORDINATION WITH OTHER AGENCIES

59. All Federal, State and local agencies having an interest in the Stony Creek study were notified of the public hearing held in Branford on 19 November 1964. All interested agencies have been consulted during the study concerning the effects of the proposed improvement on their activities. The U. S. Coast Guard has furnished information concerning navigation aids. (See Appendix B). The U. S. Fish and Wildlife Service in cooperation with the Connecticut State Shellfish Commission and the Connecticut State Board of Fisheries and Game has furnished a report. It states that the dredging as proposed, would not significantly affect fish and wildlife resources provided that disposal of dredged material is not made on the mud flats and marshes north of the project area, and the marsh area east of the town wharf. The U. S. Fish and Wildlife Service report is included in Appendix A. Shellfish interests requested at the public hearing that precautions be taken to protect the valuable oyster growing grounds in the vicinity of the proposed channel south of Frisbie Island during construction and subsequent maintenance. They claim that silting from dredging operations could affect the oyster beds up to 500 feet each side of the channel.

## SCHEDULE FOR DESIGN AND CONSTRUCTION

60. It is estimated that preparation of contract plans and specifications for the project will require six months. The estimated cost is \$11,000.

61. Construction of the project can be accomplished under a single contract to be completed in a 5-month period. Estimated Corps of Engineers expenditures are as follows:

a. Allocated to date

Reconnaissance Report	\$4,000
Detailed Project Report	<u>13,000</u>
Total Study Costs	\$17,000

b. Required to Complete

Plans and Specifications	11,000
Construction, engineering during construction, super- vision and administration	<u>92,000</u>
Total Cost (Corps of Engineers)	\$103,000

## OPERATION AND MAINTENANCE

62. Maintenance of the project will be the responsibility of the United States. It is estimated that periodic dredging will be required about every 5 years. The average annual cost for the removal of an estimated 4000 cubic yards every year is \$8,000. The estimated average annual cost for the maintenance of navigation aids is \$300 to be assumed by the U. S. Coast Guard.

## CONCLUSIONS

63. Channel approach and anchorage facilities at Stony Creek are inadequate for the commercial and recreational craft now using the harbor. Under existing conditions, the majority of the locally based recreational boats are closely moored, in the shallow unimproved harbor, to stakes equipped with pulley lines. Nearly all craft navigating in the area north of Wheeler's Island run the risk of grounding at low water. Commercial vessels operating out of the harbor are hampered by tidal delay. Improvement of the harbor would correct these difficulties and attract greater use. Improvement could be accomplished by dredging a channel 100 feet wide, 6 feet below mlw from deep water in Long Island Sound northwest of Wheeler's Island to the Town Dock and a maneuvering basin 6 feet below mlw totalling 3.5 acres north of the landing.

64. The harbor at Stony Creek is not large enough to accommodate all of the existing locally based and transient recreational fleets in open anchorage even with overall improvement. In order to provide space for these craft, modern marina facilities adjacent to the proposed Federal project are necessary. It is expected that the existing marinas will be modernized and expanded to accommodate all of the existing recreational fleet immediately upon completion of the access channel and turning basin. Adequate shore area suitable for the development of additional marina facilities is available in the area adjacent to the proposed Federal project. This area will be developed to accommodate future expansion of the recreational fleet. A permit for a 100 boat marina was approved 11 January 1965. It would be constructed at the time of project completion.

65. Stony Creek is in one of the fastest growing areas in the nation and the demand for leisure time recreation pursuits is growing comparably. Based on similar proposed and executed small harbor developments in southern New England it can be fully expected that Federal navigation improvement will act as a catalyst in the development of shore and marina facilities exceeding presently known plans, and providing further direct and intangible benefits beyond those estimated.

66. The benefits accruing to the commercial and recreational craft presently using the harbor, and in the future as a result of the proposed Federal project, indicate that the improvement is economically justified with a benefit-cost ratio of 2.8 to 1.0. Local interests indicate that the improvement will meet their needs, and that the requirements of local cooperation will be met. All agencies known to be interested have been consulted and have expressed no objection to the improvement. Oyster farming interests have expressed concern over possible damage to oyster beds in the vicinity of the channel. They have requested that precautions be taken to minimize injury to shellfish during construction and maintenance of the project. The proposed improvement meets the criteria for authorization under Section 107 of the River and Harbor Act of 1960 as amended in 1965.

### RECOMMENDATION

67. The Division Engineer recommends Federal improvement of Stony Creek, Branford, Connecticut, be authorized under provisions of Section 107 of the River and Harbor Act of 1960 as amended in 1965, to provide for: an entrance channel 6 feet below mlw, 100 feet wide from deep water in Long Island Sound to a point 800 feet north of the public wharf at Stony Creek and a maneuvering basin 6 feet below mlw totalling 3.5 acres adjacent to the channel north of the wharf.

The total project cost is estimated to be \$195,000 exclusive of \$700 for aids to navigation. Annual maintenance costs are estimated at \$8,000 for dredging the channel and basin and \$300 for aids to navigation. In view of the local nature of the recreational benefits, local interests should be required to contribute toward the project cost. The recommendation is made subject to the conditions that local interests:

(a) Provide a cash contribution of 47.3 percent of the first cost of construction, presently estimated at \$92,000.

(b) Provide, maintain and operate without cost to the United States, an adequate public landing with berthing depth alongside commensurate to the Federal channel depth, parking areas and other public use facilities open to all on equal terms.

(c) Provide and maintain depths in service channels to the principal marinas and berthing areas commensurate with those provided in the Federal project. Slips and berthing facilities are to be constructed outside the limits of the Federal project.

(d) Hold and save the United States free from damages which may result from construction and maintenance of the project.

(e) Provide, without cost to the United States, all necessary lands, easements, and rights-of-way needed for the construction and maintenance of the project and for aids to navigation upon request of the Chief of Engineers, including suitable areas when determined by the Chief of Engineers to be required in the general public interest for subsequent disposal of spoil, and also necessary retaining dikes, bulkheads and embankments thereof or the costs of such retaining works.

(f) Regulate the use, growth and free development of the harbor facilities so that said facilities will be open to all on equal terms.

(g) Make such utility and other relocations or alterations as required for project purposes.

(h) Establish regulations concerning discharge of untreated sewage, garbage, and other pollutants in the waters of the harbor by users thereof, which regulations shall be in accordance with applicable laws or regulations of Federal, State and local authorities responsible for pollution prevention and control.





# LIST OF PROBINGS

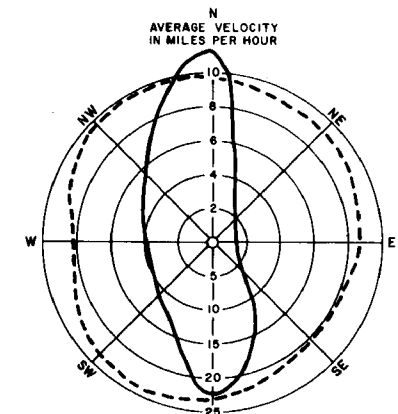
ELEVATION BELOW M.L.W.				REMARKS	ELEVATION BELOW M.L.W.				REMARKS	ELEVATION BELOW M.L.W.				REMARKS
NUMBER	DEPTH OF WATER	DEPTH OF PROBE	PENETRATION		NUMBER	DEPTH OF WATER	DEPTH OF PROBE	PENETRATION		NUMBER	DEPTH OF WATER	DEPTH OF PROBE	PENETRATION	
1	3.3	8.3	5.0	M, S, G	29	0.4	8.9	8.5	M and stones	57	0.5	7.6	7.1	M to RI
2	3.7	8.2	4.5	M to Rf.	30	0.7	12.5	11.8	M	58	0.5	7.8	7.3	M to RI
3	3.7	9.2	5.5	M to G	31	0.4	10.6	10.2	M	59	0.6	8.2	7.6	M to Rf.
4	4.8	9.0	4.2	M	32	0.5	8.5	8.0	M to hard	60	0.5	1.2	0.7	M to L
5	3.8	10.8	7.0	M and S	33	0.2	11.5	11.3	M	61	0.6	2.7	2.1	M to L
6	4.1	12.5	8.4	M	34	0.1	8.2	8.1	M to S to G	62	0.5	7.0	6.5	M to Rf.
7	4.0	8.1	4.1	M and S to RI	35	0.3	12.3	12.0	M	63	0.6	8.9	8.3	M
8	4.1	12.0	7.9	M to G	36	0.3	10.7	11.0	M to S to G	64	0.7	6.1	5.4	M to RI
9	4.5	13.0	8.5	M and S	37	0.3	8.7	8.4	M to S	65	0.8	7.3	6.5	M to RI.
10	5.0	13.0	8.0	M	38	0.5	9.1	9.6	M to M and S	66	0.9	9.0	8.1	M
11	4.2	13.2	9.0	M	39	0.2	8.0	8.2	M to M and S to hard	67	0.6	6.3	5.7	M to S & G to RI
12	5.4	13.7	8.3	M	40	0.9	8.0	8.9	M to C to hard	68	0.6	6.5	5.9	M to G to C to RI.
13	5.7	13.2	7.5	M	41	1.2	7.2	8.7	M to C	69	0.5	7.4	6.9	M
14	6.2	8.9	2.7	M	42	0.9	0.9	0.0	L	70	0.6	3.7	3.1	M to RI.
15	5.1	10.9	5.8	M	43	0.6	1.2	0.6	L	71	0.5	5.3	4.8	M to S & G to RI.
16	2.2	9.5	7.3	M	44	0.6	3.7	3.1	L	72	0.6	6.4	5.8	M to S & G to RI.
17	3.1	9.4	6.3	M	45	0.6	4.8	4.2	L	73	0.6	8.1	7.5	M to S & G to RI.
18	1.5	8.4	6.9	M to S	46	0.7	6.3	5.6	RI.	PROBING NOTES: Probing shown thus: P-2 ● are in feet and tenths and are referred to the plane of Mean Low Water. Probing were taken with a 3/4" pointed iron pipe forced down by 2 men.				
19	1.7	8.4	6.7	M	47	0.7	7.1	6.4	RI.					
20	1.5	8.7	7.2	M	48	0.8	6.1	5.3	RI.	LEGEND: M = Mud; S = Sand; G = Gravel; C = Clay; L = Ledge; Rf. = Refusal.				
21	1.6	9.1	7.5	M	49	0.8	6.3	5.5	RI.					
22	1.4	9.2	7.8	M and S	50	0.8	6.0	5.2	RI.					
23	0.7	9.0	8.3	M and S	51	0.4	3.5	3.1	RI.					
24	0.6	9.7	9.1	M and S	52	0.4	6.2	5.8	RI.					
25	1.1	9.8	8.7	M and S	53	0.4	8.0	7.6	M to RI.					
26	1.0	9.3	8.3	M and S	54	0.5	9.0	8.5	M to RI.					
27	1.0	8.9	7.9	M	55	0.5	4.4	3.9	M to RI.					
28	0.9	9.4	8.5	M	56	0.5	8.0	7.5	M to RI.					

## PROBING NOTES:

Probing shown thus: P-2 are in feet and tenths and are referred to the plane of Mean Low Water. Probing were taken with a 3/4" pointed iron pipe forced down by 2 men.

## LEGEND:

M = Mud; S = Sand; G = Gravel; C = Clay;  
L = Ledge; RI = Refusal.



WIND DIAGRAM FOR NEW HAVEN, CONN.

LEGEND  
--- AVERAGE VELOCITY IN M.P.H.  
--- DURATION IN PERCENT OF TIME

## STONY CREEK

## 6' MANEUVERING BASIN

DESIRED IMPROVEMENT  
RECOMMENDED  
MANEUVERING BASIN  
3.5 ACRES - 6 FT. DEEP  
CHANNEL  
100 FT. WIDE - 6 FT. DEEP

## ENLARGEMENT-DETAIL PROBINGS

SCALE IN FEET  
0 50 100

## APPENDICES

Appendix A U. S. Fish and Wildlife Report

Appendix B U. S. Coast Guard Report

Appendix C Letters from State of Conn. and Town of  
Branford.



APPENDIX A

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE

U. S. Post Office & Courthouse  
Boston, Massachusetts 02109

June 25, 1965

Division Engineer  
New England Division  
U. S. Army Corps of Engineers  
424 Trapelo Road  
Waltham, Massachusetts 02154

Dear Sir:

This is our conservation and development report on the fish and wildlife resources related to the navigation improvements being considered for Stony Creek Harbor, Branford, Connecticut. Your study was authorized under Section 107 of the River and Harbor Act approved July 14, 1960. Our study was made under authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-666 inc.), in cooperation with the Connecticut State Shell Fish Commission and the Connecticut State Board of Fisheries and Game. This report has the concurrence of those agencies, as indicated by their letters dated June 14, 1965.

Mr. Leslie's May 21, 1965 letter informed us of the plan of improvement that has been developed. It provides for a 1,000-foot entrance channel 100 feet wide, six feet deep, extending from water of that depth in Long Island Sound north of Wheelers Island to a point 75 feet off the town dock at Stony Creek with a 6-acre anchorage and turning basin, 6 feet deep, north of the town dock.

Approximately 10,000 cubic yards of material will be removed from the channel and 50,000 cubic yards from the turning basin. The dredged material would be removed by scow to an approved offshore dumping ground in Long Island Sound.

Recreational boating in the small and picturesque Stony Creek Harbor is of major importance but the existing anchorage is overcrowded. The town dock is adequate for the present boating with use being somewhat restricted by tides. The numerous islands give the harbor good protection against storms but they also make navigation in the vicinity rather hazardous.

Approximately 80 acres of mud flats lie along the northern edge of the harbor area. Two marshes totaling approximately 130 acres lie adjacent to the mud flats on the east and west sides of Pleasant Point. These units contribute much to the coastal waterfowl and marine fishery habitat complex which is important

to the waterfowl and marine fishery resources along this segment of the coast line.

One of the most important oyster grounds found along the entire Connecticut coast line lies off Stony Creek Harbor. It is one of two unpolluted areas along the entire Connecticut coast presently used for maturing oysters. All of the bottom-producing area is privately owned and under town control. The growing grounds encompass the entire Thimble Island complex and extend inland to Burr Island in Stony Creek Harbor. These beds are worked regularly and constitute a valuable resource significantly important to the local economy. Although the oyster grounds are closely associated with Stony Creek Harbor, oysters are not landed at the Stony Creek town dock. Hard clams (quahogs) are intermittently harvested in these waters by a single operator.

Lobster landings at Stony Creek are of importance. There are five or six lobster boats that work out of this harbor. About half of these operate on a near full-time basis whereas the others operate on a part-time basis.

A number of sport fishing boats that fish the offshore waters in the vicinity operate out of the harbor. In addition to private sport fishing boats, there are two or three party boats that use the town dock. The major portion of the small boat fleet using this harbor, however, is comprised of the recreation type boats.

Dredging, as presently planned, would not significantly affect fish and wildlife resources.

A harbor improvement could result in some slight benefits to the lobster fishermen. These benefits, however, would not be significant and would be realized in terms of convenience, creating conditions that would make it somewhat easier for the existing fishermen to carry out their in-harbor routine. The improvement is not expected to result in any noticeable increase in lobster trapping effort or landings.

We are pleased to note that the two recommendations we made in our January 13, 1965 preliminary report have been incorporated into the project plan. These were that spoiling be done on an approved dumping ground in Long Island Sound, and that the dredging of the anchorage and turning basin be limited to the vicinity of the town dock.

We understand that often after the bid specifications for construction of the project are released, a prospective bidder may suggest a change in the specifications, including designation of spoiling sites. If the bidder's suggestion is approved, the Corps of Engineers releases an amendment to the bid specifications for the construction of the project. We are usually most concerned when such changes involving alternate spoil areas are considered. When the bid specifications for this project are released, we would object to any proposal by a bidder for an amendment to the specifications considering the use of the mud flats and marshes north of the project

area and the marsh area just east of the town wharf or any portion thereof as an alternate spoil area.

Sincerely yours,

*Richard E. Griffith*

Richard E. Griffith  
Regional Director  
Bureau of Sport Fisheries & Wildlife

*for* *Gonard Y. Acker*

John T. Gharrett  
Regional Director  
Bureau of Commercial Fisheries

June 14, 1965

Mr. Ralph A. Schmidt  
Regional Supervisor  
Branch of River Basin Studies  
Fish and Wildlife Service  
U. S. Post Office and Courthouse  
Boston, Massachusetts 02109

Dear Mr. Schmidt:

This is in reference to your letter of June 8, 1965 with the review draft of your conservation and development report related to navigation improvements being considered off Stony Creek Harbor, Branford, Connecticut.

The Shell Fish Commission is in agreement with your comments and recommendations for this project.

Thank you for your cooperation.

Sincerely yours,

CONN. STATE SHELL FISH COMMISSION

Ernest J. Kontya  
Engineer of Shell Fisheries

EPJ:mem

RECEIVED

June 14, 1965

Mr. Ralph A. Schmidt  
Regional Supervisor  
Branch of River Basin Studies  
U. S. Post Office and Courthouse  
Boston, Massachusetts 02109

Dear Mr. Schmidt:

I acknowledge your June 8, 1965 letter with attached review draft of June 8, 1965 concerning your conservation and development report on the fish and wildlife resources related to the navigation improvements being considered for Stony Creek Harbor, Branford, Connecticut.

We have reviewed the draft and concur with its contents, except for the third sentence in paragraph five. We suggest this sentence be changed to read as follows:-

"These units contribute much to the coastal waterfowl and marine fishery habitat complex which is important to the waterfowl and marine fishery resources along this segment of the coast line."

Very truly yours,

  
Theodore B. Hampton  
Director

OBP:cm

APPENDIX B

TREASURY DEPARTMENT  
UNITED STATES COAST GUARD

Address reply to:  
COMMANDER  
3RD COAST GUARD DISTRICT  
U. S. CUSTOM HOUSE  
NEW YORK, N. Y. 10004

3260  
30 August 1966

From: Commander, Third Coast Guard District  
To: U. S. Army Engineers - Division New England  
Corps of Engineers  
424 Trapelo Road  
Waltham, Massachusetts 02154

Subj: Stony Creek, Branford, Connecticut; cost for improved aids to navigation

Ref: (a) Your ltr NEDED-R dtd 3 May 1966

1. As requested in reference (a), you are advised that the improvements in Stony Creek, Branford, Connecticut, will require the following aids to navigation:

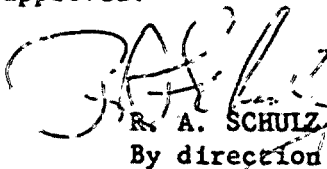
BUOYS

<u>Number Required</u>	<u>Type</u>	<u>Unit Cost</u>	<u>Total First Cost</u>
5	5C	\$133.00	\$665.00

Annual Maintenance - \$260.00

2. The above estimates are approximate and subject to change with any change of project or material cost.

3. Your map is returned. It has been marked to show buoys that would be required if the project is approved.

  
R. A. SCHULZ  
By direction

Encl: (1) Corps of Engnrs. map

  
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APPENDIX C  
**STATE OF CONNECTICUT**  
WATER RESOURCES COMMISSION  
STATE OFFICE BUILDING • HARTFORD 15, CONNECTICUT

November 8, 1966

Mr. Remi O. Renier, Colonel  
Acting Division Engineer  
U. S. Army Engineers  
New England Division  
424 Trapelo Road  
Waltham, Massachusetts

Re: Stony Creek Harbor  
Improvement, Branford

Dear Colonel Renier:

Reference is made to your letter of July 8, 1966 requesting our comments on the proposed plan of improvement of Stony Creek Harbor in Branford.

It appears that the alternate plan provides a very small saving in total cost. On the assumption that the basic plan was made to conform with existing design standards, it appears that such a saving would not be worthwhile if it in any way reduced the value of the project. However, this agency feels that local interests should exercise some decision between these two plans because they have a more intimate knowledge of local conditions affecting this project.

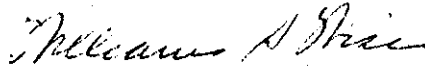
This Commission can cooperate under the statutes on either plan. Special Act 358, approved in July 1965, appropriated \$75,000 to the Water Resources Commission to assist in complying with the required local cash contribution to this project. This appropriation we believe indicates that the State and the town are together willing and able to meet this part of the requirement.

November 8, 1966

Another fact is that the State statutes also permit this Commission to satisfy the "hold and save requirements" on such projects if the town does not wish to do so. It is our understanding from the meeting with the town officials on June 29, 1966 that they anticipate no difficulty in complying with the other requirements as outlined in your letter.

This Commission, therefore, hopes that these views and facts will assist you in proceeding towards the completion of this project to the satisfaction of the local interests.

Very truly yours,



William S. Wise  
Director

WSW:JC:s



**BOARD OF SELECTMEN**  
**BRANFORD, CONNECTICUT 06405**

September 21, 1966

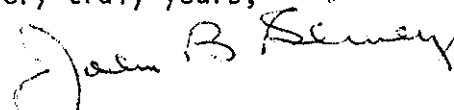
JOHN B. SLINEY  
FIRST SELECTMAN  
HERBERT J. SYKES  
JOHN N. RUSSELL

John Wm. Leslie ✓  
Chief, Engineering Division ✓  
Corps of Engineers  
424 Trapelo Road  
Waltham, Mass. 02154

Dear Mr. Leslie:

The Board of Selectmen is of the opinion that  
the proposed improvement at Stony Creek harbor would meet  
the needs for navigation improvement in Stony Creek and  
that the local interests will cooperate in meeting the  
\* requirements of local participation.

Very truly yours,

  
John B. Sliney

JBS:al

JOHN DEMPSEY  
GOVERNOR



STATE OF CONNECTICUT  
EXECUTIVE CHAMBERS  
HARTFORD

November 22, 1967

Colonel Remi O. Renier  
Department of the Army  
New England Division, Corps of Engineers  
424 Trapelo Road  
Waltham, Massachusetts 02154

Dear Colonel Renier:

Thank you for your recent letter concerning the proposed channel improvements at Stony Creek in the Town of Branford.

I am advised after consultation with the responsible officials, that both the State of Connecticut and Branford are in a position to promote this project.

State funds have been made available through two prior actions of our State Legislature and our Division of Water Resources is advised that Branford stands ready to meet additional requirements outlined in your letter.

Sincerely,

A handwritten signature in black ink, appearing to be "John Dempsey", written over the word "Governor".

Governor

D:md

**BOARD OF SELECTMEN  
BRANFORD, CONNECTICUT 06405**

October 17, 1967

JOHN B. SLINEY  
FIRST SELECTMAN  
HERBERT J. SYKES  
~~XXXXXXXXXXXX~~  
Gene Bontatibus

Mr. John M. Leslie  
Chief Engineering Division  
N. E. Corps of Engineers  
424 Trapelo Road  
Waltham, Mass.

Dear Mr. Leslie:

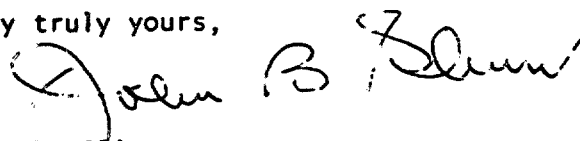
Re: Stony Creek Dredging

Thank you for your letter of August 24, 1967.

This is to inform you that local interests will provide and maintain depths in service channels to the principal marinas and berthing areas commensurate with those provided in the Federal project at Stony Creek. This would also apply to the areas where water and fuel are available, other than at the public landing.

We trust the foregoing answers your questions and the Governor Dempsey's comments on the project are now in order.

Very truly yours,

  
John B. Sliney